

REMARKS/ARGUMENTS

In response to the May 21, 2004 Office Action, the amendments herein are provided. Claims 5-7, 10-15, 19-53, 58-60 and 64 are pending in this application. Claims 1, 10, 23, and 26 have been amended herein. Claims 8-9 and 54-57 are canceled herein.

The Examiner's indication of the allowance of claims 14, 15, 19-22, 30-36 and 60 is noted with appreciation. Further, the Examiner's indication that claims 1, 5-7, 37-47 and 58-59 would be allowable if the claims were amended to clarify an antecedent basis issue is noted, and as amended above these claims are now respectfully submitted to be in condition for allowance.

Claims 8-9, 23-29, 48-57 and 64 were rejected in the May 21, 2004 Office Action.

Rejection of Claims 8-9 and 54-57

Claims 8-9 and 54-57 are canceled by the present amendment, to expedite prosecution of the remaining claims. This cancellation is done without prejudice to further prosecution of these claims through filing a continuation application.

Rejection of Claims 23-29, 48-53 and 64

The above amendments to claims 23 and 26 are provided to clarify the claims. In connection with the present amendments to claim 23 and 26, it is respectfully submitted that claims 23 and 26 are patentable over the references. It is further respectfully submitted that as set forth below claims 48-53 and 64 are also patentable over the references as set forth below.

Claim 23 recites a delay circuit between the solid state switch and the amplifier discharge circuit. This delay circuit allows for the electrical pulse which is applied to electrodes connected with the amplifier discharge circuit to coincide with the oscillator laser output beam being directed into the amplifier laser tube. The use of delay circuit, in an oscillator and amplifier system, where the delay circuit is used in combination with a solid state switch, as recited by claim 23, where the delay circuit is between the solid state switch and the amplifier discharge circuit does not appear to be disclosed in or suggested by the references.

Specifically, the 5/21/04 Office Action rejects claim independent claims 23, 26, 48, 51 under 35 USC §103, as being unpatentable over Kakehata et al (Appl. Phys. Lett. 61 (26) 28 December 1992, pp. 3089-3091) in view of Wakata (US Patent no. 5,305,338). As shown on

page 4 of the Office Action, the rejection is based on the general teaching of Wakata regarding using laser discharge circuit with solid state switches, and the teaching of Kakehata regarding a laser oscillator and laser amplifier system. Based on a careful review of both of these references it is respectfully submitted that there appears to be nothing in either of these references related to the idea of using a solid state switch connected to an amplifier discharge circuit and an oscillator discharge circuit, and a delay circuit, where this combination of elements operates to delay an electrical pulse applied to the amplifier discharge circuit relative to an electrical pulse applied to the oscillator discharge circuit. Further, claim 23 also requires that the delay circuit be coupled between the solid state switch and amplifier discharge circuit.

As appears to be recognized in the 5//21/04 Office Action, there is no suggestion or teaching in Wakata relative to using solid state switches in combination with controlling the timing of pulses applied to discharge circuits of oscillator and amplifier discharge circuits. Kakehata does provide some discussion regarding synchronization of between an oscillator and amplifier discharge. See, Kakehata, p. 1 and Kakehata, Fig. 1. The teaching of Kakehata clearly shows a system using a KrF laser pulse in combination with an optical delay line for controlling the timing between the oscillator and the amplifier. It is respectfully submitted that this use of a KrF laser and an optical delay line is very different than using a solid state switch and a delay circuit to control the discharge of an oscillator and an amplifier as recited by claim 23. Thus, it is respectfully submitted that claim 23 is patentable over the references. Further, claims 24-25 and 64 depend from claim 23 and are respectfully submitted to be patentable for at least the same reasons as claim 23.

Claim 26 is similar to claim 23, but instead of reciting that a delay circuit is coupled between the solid state switch and the amplifier discharge circuit, claim 26 provides that the delay circuit is coupled to a second solid state switch, and the delay circuit provides for a delay between an electrical pulse being applied the oscillator discharge circuit and the amplifier discharge circuit. It is respectfully submitted that this use of the delay circuit coupled to a second solid state switch is very different than the system used for synchronization which is described in the Kakehata reference. Thus, it is submitted that claim 26 is patentable over the references. Further, claims 27 – 29 depend from claim 26 and are submitted to be patentable over the references for at least the same reasons as claim 26.

Claim 48 recites a laser system which includes an oscillator and an amplifier. The system has two laser tubes and two discharge circuits. The system also includes a power supply and a solid state switch for switching an electrical pulse from the power supply to the discharge circuits. The system further includes a delay circuit which is coupled between the solid state switch and the second discharge circuit, such that pulses emitted by the oscillator laser are amplified. It is respectfully submitted that the system of claim 48, which provides for switching of electrical pulses, and a delay coupled to the switch, which operates to provide for synchronization of the timing of electrical pulses, is very different than the system of Kakehata which appears to use a very different approach of providing for a laser pulse and an optical delay to control synchronization. Further, it appears that none of the teaching in Wakata suggests that a solid state switch should be used in connection with a delay to control the timing of electrical pulses being applied to first and second discharge pulses. Thus, it is respectfully submitted that claim 48 and its dependent claims 49-50 are patentable over the references.

Claim 51 recites a laser system which includes an oscillator and amplifier, and a discharge circuit for the oscillator and a discharge circuit for the amplifier. A first switch is coupled to the discharge circuit for the oscillator, and a second switch is provided for the discharge circuit for the amplifier. A trigger signal circuit is provided, which provides a trigger signal to both the first and second switches. A delay line is provided between the trigger circuit and the second switch, which operates to delay the trigger signal reaching the second switch, such that the output from the oscillator is amplified by the amplifier. The system of claim 51 relies on the delay line between the trigger circuit and the second switch to control the timing of the electrical trigger signal reaching the second switch, which controls the timing of the electrical pulses being applied to the second discharge circuit. It is respectfully submitted that such a system is very different than that described above in connection with the Kakehata and Wakata references. Thus, it is respectfully submitted that Claim 51 and its dependent claims 52 and 53 are patentable over the references.

CONCLUSION

For the reasons set forth above, it is believed that all claims present in this application are patentably distinguished over the references, and in condition for allowance. Therefore, reconsideration is requested, and it is requested that this application be passed to allowance.

Respectfully submitted,

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